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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,013	01/23/2004	Wade Brown	E0055/286677	8961

23370 7590 12/05/2005

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EXAMINER	
MACKEY, JAMES P	
ART UNIT	**PAPER NUMBER**
1722	

DATE MAILED: 12/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/764,013	BROWN ET AL.	
	Examiner	Art Unit	
	James Mackey	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-39 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-39 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 01 July 2004 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. Claims 2, 37 and 38 are objected to because of the following informalities: in claim 2, line 1, the period should be deleted; and in claims 37 and 38, line 2, "on of" should be --one of--. Appropriate correction is required.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-3, 6, 8, 10-13, 22, 25, 26, 30, 31, 35-37 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, lines 7-8, "the at least two opposed flat endless belts" is indefinite as to which of the two first or two second belts is intended.

In claim 2, line 2, "the mold belt cavity" should be --the mold cavity--; and lines 5-6, "the flat endless belts" is indefinite as to which of the two first or two second belts is intended.

In claim 3, "the flat endless belts" is indefinite as to which of the two first or two second belts is intended.

In claims 6, 25, 30 and 36, "other low friction polymer" is of indefinite scope, since the relative term "low friction" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

In claim 8, line 2, "near" is a relative term of indefinite scope; line 3, "the slider bed or platen" lacks proper antecedent basis in the claim (note that the slider bed or platen is recited in claim 4, but claim 8 does not depend from claim 4); and line 4, "the flat endless belt" is indefinite as to which of the two first or two second belts is intended.

Claims 10 and 11 should depend from claim 2 in order to provide proper antecedent basis for "the profile mold belts".

In claim 10, line 3, "the flat endless belt" is indefinite as to which of the belts is being referred to.

In claim 12, line 1, "tensioner" should be plural, since claim 11 sets forth a plurality of tensioners.

In claim 13, line 1, "the flat endless belts" is indefinite as to which of the two first or two second belts is intended; and lines 2-3, "the additional opposed flat endless belts" is indefinite as to whether these are in addition to the belts previously recited, or if not, which belts are being referred to.

In claim 22, lines 6-7, "said first or second flat belt" lacks proper antecedent basis in the claim, and should be changed to --said first or second belt--.

In claim 26, line 2, "support surface" should be --supporting surface--; and line 4, "said second rigid support surface" should be --said first rigid supporting surface--.

In claim 31, lines 2 and 4, "support surface" should be --supporting surface--; and line 3, "communication with a pressurized air film" is incomplete and should be --communication with a pressurized air source to provide a pressurized air film--.

In claims 35 and 37, "at least one of said first rigid supporting surfaces and said second rigid supporting surfaces" lacks proper antecedent basis, since claim 34 only recites second rigid supporting surfaces.

Claim 39 should depend from claim 33 in order to provide proper antecedent basis for "said mold member".

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3, 4, 14, 21, 23, 29, 32 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Smith (U.S. Patent 529,535; Figure 1; page 1, lines 50-101).

Smith teaches a molding apparatus and process comprising introducing moldable material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed flat belts 1, 5, 6, 15 (page 1, lines 50-101), supporting outer surfaces of one pair of the belts by a rigid supporting platen surface 13, 14, exerting pressure on the moldable material through the belts while the material is transferred along the mold cavity by longitudinal movement of the belts via a drive mechanism during hardening of the material, and removing the molded material from the mold cavity.

6. Claims 1, 3-6, 14, 16, 20, 21, 23-25, 29, 30, 32 and 34-36 are rejected under 35 U.S.C. 102(b) as being anticipated by Holman (U.S. Patent 3,890,077; Figures 1, 5 and 7; col. 2, lines 35-38, and col. 3, lines 1-60).

Holman teaches an apparatus and process for molding a filled thermosetting resinous lumber product (col. 2, lines 35-38) by introducing moldable material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed flat belts 16, 22, 24, 50 (Fig. 7), supporting outer surfaces of the belts by a rigid supporting bed/platen surface 10, 36, 38 (Fig. 5), providing a friction-reducing polymer material between the bed 10 and belt 16 (col. 3, line 14), exerting pressure on the moldable material through the belts while the material

is transferred along the mold cavity by longitudinal movement of the belts via drive mechanism 56 during curing of the material, and removing the molded lumber product from the mold cavity.

7. Claims 1, 3, 9, 14, 17, 21, 23, 27, 29, 32 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Berner (U.S. Patent 3,065,500; Figures 1-3; col. 2, lines 13-60).

Berner teaches an apparatus and process for molding foamed material by introducing moldable material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed, adjustably mounted flat belts 20, 22, 54, 56 (col. 2, lines 13-47), supporting outer surfaces of the belts by rigid support rollers 74, 76, exerting pressure on the moldable material through the belts while the material is transferred along the mold cavity by longitudinal movement of the belts via drive mechanism 52 during curing/hardening of the material, and removing the molded material from the mold cavity.

8. Claims 1, 3, 9, 14, 16, 17, 21, 23, 27, 29, 32 and 34 are rejected under 35 U.S.C. 102(b) as being anticipated by Saeki et al. (U.S. Patent 5,340,300; Figs. 2-5 and 13; col. 4, lines 31-45).

Saeki et al. teach an apparatus and process for molding a reinforced foamed thermosetting resin by introducing molding material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed, adjustably mounted flat belts 2-5 (col. 4, lines 31-45), supporting outer surfaces of the belts by rigid support rollers 12, exerting pressure on the moldable material through the belts while the material is transferred along the mold cavity by longitudinal movement of the belts via a drive mechanism during curing/hardening of the material, and removing the molded material from the mold cavity.

9. Claims 1-3, 10-15, 17-23, 28, 29, 32-34 and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Kemerer et al. (U.S. Patent 4,128,369; Figures 23-24; col. 1, lines 24-32, col. 12, lines 41-45, col. 13, lines 1-3, col. 27, lines 1-33).

Kemerer et al. '369 teach an apparatus and process for molding a foamed siding or roofing product (col. 1, lines 24-32; col. 7, line 38) by introducing moldable material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed flat belts 36, 38, 340, 342 (Figs. 23-24; col. 27, lines 1-33), the belts having pairs of opposing profile mold belts 40, 40A, 352, 354 in contact with the inner surfaces of the first and second pairs of belts (at elements 42, 118, 356, 358) for imparting a profile shape to the molded product wherein the mold belts are formed of an elastomeric face layer with a reinforced backing layer (col. 12, lines 41-45; col. 13, lines 1-3), providing tensioning pulley means for supporting the mold belts (col. 16, lines 18-21), supporting outer surfaces of the first and second pairs of belts by rigid support rollers 100, 350, exerting pressure on the moldable material through the belts while the material is transferred along the mold cavity by longitudinal movement of the belts via drive mechanism 84 during hardening of the material, and removing the molded product from the mold cavity.

10. Claims 1, 3-5, 14, 16, 17, 21, 23, 24, 29, 32, 34 and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Sagane et al. (U.S. Patent 3,917,774; Figures 1, 2 and 13b; col. 4, lines 8-16, col. 5, lines 28-45, col. 7, lines 6-20 and 55-65).

Sagane et al. teach an apparatus and process for molding a fiber-reinforced foamed thermosetting resin by introducing moldable material into an end of a mold cavity formed by inner surfaces of first and second orthogonal pairs of opposed flat belts 5, 6, 7 (col. 4, lines 8-

16), supporting outer surfaces of the belts by a rigid supporting slider bed surface 9, providing a friction-reducing lubricant coating between the rigid surface and the outer surfaces of the belts (col. 7, lines 6-20 and 55-65), exerting pressure on the moldable material through the belts while the material is transferred along the mold cavity by longitudinal movement of the belts via a drive mechanism during curing/hardening of the material, and removing the molded material from the mold cavity.

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14. Claims 2, 9-13, 15, 18, 19, 22, 27, 28, 33, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagane et al. (U.S. Patent 3,917,774; Figures 1, 2 and 13b; col. 4, lines 8-16, col. 5, lines 28-45, col. 7, lines 6-20 and 55-65).

Sagane et al. disclose the apparatus and process substantially as claimed, as described above, and further including a profile mold belt 54 (Fig. 13b) disposed on the inner surface of one of the belts 53 for molding a profile into the molded product, wherein the mold belt may be formed of fiber-reinforced elastomeric rubber (col. 5, lines 28-45). It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Sagane et al. by including a pair of opposed profile mold belts in order to mold a profile into opposed surfaces of the molded product. It would have been further obvious to a skilled artisan to provide tensioning pulleys for the mold belts, as is conventional in the molding art, in order to maintain the mold belts in tension and thereby maintain the shape of the belts during pressing. Moreover, it would have been obvious to a skilled artisan to modify Sagane et al. by providing the belts with adjustable means in order to adjust the size/shape of the mold cavity, especially considering that Sagane et al. recognize that products of different shapes may be produced in the apparatus (col. 7, lines 45-47).

15. Claims 6-8, 25, 26, 30, 31, 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagane et al. in view of Kemerer et al. (U.S. Patent 5,700,495; Figures 7 and 10; col. 18, line 57 through col. 20, line 67).

Sagane et al. disclose the apparatus substantially as claimed, except for the lubrication means between the belt and the support surface being either a low-friction polymer or an air-film lubrication system. Kemerer et al. '495 disclose a belt molding apparatus including a pair of opposed mold belts 26, 28 (Figs. 1 and 10; col. 19, line 63 through col. 20, line 67) having outer surfaces supported by guide platens 227, 231, wherein a fluoropolymer coating 242 is provided between each belt and respective guide platen, and wherein an air-film lubrication system, including air plenums 250, 251, is also provided between each belt and respective guide platen. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the apparatus of Sagane et al. by providing the lubrication means as either a fluoropolymer or air-film lubrication system, as disclosed in Kemerer et al. '495, in order to improve the lubrication of the moving belt on the support platen surface.

16. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kemerer et al. (U.S. Patent 5,458,477; Figure 2; col. 11, lines 17-53) disclose air-film lubrication means in a belt press apparatus, and including a low-friction PTFE or UHMWPE layer 59 between the guide platen/plenum and the respective belt. Klepsch (U.S. Patent 6,343,924; col. 6, lines 31-35 and col. 7, lines 30-33) discloses air-film lubrication means in a belt press apparatus, and wherein the belt may comprise a PTFE coating on a polymer web. Harris et al. (U.S. Patent 2,817,875; Figures 1-7) discloses a four-belt molding system.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on 571-272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Mackey
Primary Examiner
Art Unit 1722
11/29/05

jpm
November 29, 2005